NOTES AND NEWS.

A regular meeting of the Southwestern Section of the American Mathematical Society will be held in the buildings of Washington University, St. Louis, on Saturday, November 30, 1907. S.

The next annual meeting of the American Association for the Advancement of Science will be held in Chicago during the Christmas Holidays. Two joint sessions of Sections A and O, Mathematics and Engineering, with the Chicago Section of the American Mathematical Society will be held on Monday afternoon and Tuesday morning, December 30 and 31. The subject for discussion is: "The Teaching of Mathematics to Students of Engineering." Prominent engineers and mathematicians will take part in the program. S.

The sixth annual meeting of the Central Association of Science and Mathematics Teachers will be held in the building of the McKinley High School at St. Louis, Mo., November 29 and 30, 1907. The Mathematics Section will hold sessions Friday afternoon and Saturday morning, at which the reports of two important committees will be presented, one on the teaching of algebra, and the other on the teaching of geometry. The leading speakers in the discussion of these reports will be Professor Florian Cajori, Colorado College; Professor E. R. Hedrick, University of Missouri; Professor G. B. Halsted, Greeley, Colo.; Professor G. C. Shutts, Whitewater, Wis.; W. W. Hart, Shortridge High School, Indianapolis; and C. W. Newhall, Shattuck School, Faribault, Minn. S.

Daniel A. Murray, Ph. D., has recently accepted the chair of Mathematics in McGill University. The title of the latest of his many popular college text books has been changed from "Practical Mathematics" to "Essentials of Trigonometry." OLIPHANT.

Readers of the MONTHLY may secure a year's subscription to the *Technical World Magazine* (regular price, $1.50) and Finkel's *Mathematical Solution Book* (regular price, $2.00), for $2.25 for the magazine and book. For $4.00, one year's subscription to the MONTHLY will be included. *The Cosmopolitan* and the MONTHLY for one year for $2.70.

BOOKS.

A First Course in the Differential and Integral Calculus. By William F. Osgood, Ph. D., Professor of Mathematics in Harvard University. 12mo. Cloth, xv+423 pages. Price, $2.00, net. New York: The Macmillan Co.

Important features, among others, in the treatment of the Calculus as carried out in

this work are, the simplicity, the clearness, and the directness with which the principles underlying the Calculus are set forth and the splendid applications and illustrations of these principles in the solution of problems in physics and mechanics. Since the ideas underlying the Calculus are nowhere brought out more clearly than in the application of its principles to the study of curves and surfaces, in Mechanics, and in definite integrals with their applications to Geometry, Physics, and Astronomy, these subjects are taken up at an earlier stage than is usually customary. Thus, for example, *curvature* is taken up in chapter VII, p. 134; *definite integrals*, Chapter IX, p. 153, and *mechanics*, Chapter X, p. 190. Chapter XVIII deals with double integrals, and Chapter XIX with triple integrals. Here the author uses a notation which should be followed by all writers on the subject, viz., for example, for

$$\int\int\int f(x, y, z)\,dx\,dy\,dz,$$

the notation

$$\int dx \int dy \int f(x, y, z)\,dz$$

is used. By this notation there is no ambiguity as to the order of integration. The book contains many valuable features too numerous to mention in the brief space at our disposal. It is very attractively printed and bound, and the selection of problems is most commendable. F.

High School Algebra. Elementary Course. By H. E. Slaught, Ph. D., Assistant Professor of Mathematics in the University of Chicago, and N. J. Lennes, M. S., Instructor in Mathematics in the Wendell Philips High School. 8vo. Cloth, xii+297 pages. Chicago: Allyn and Bacon.

As stated in the preface, the important features of this text-book are: (1) Algebra is here vitally and persistently connected with arithmetic; (2) the enunciation of the principles of algebra in eighteen short sentences; (3) the solution of problems rather than the construction of purely theoretical doctrine as an end in itself; and (4) the determination of the order of the topics and the inclusion of the order of the topics, and the inclusion and exclusion of subject matter by the main purpose of the course itself.

The book is based on true scientific and pedagogical principles. Great care is taken in laying the foundation of the subject. The problems are drawn, for the most part, from the experiences of every-day life and are of a nature easily within the comprehension of the beginner. From a pedagogical point of view the book is all that can be desired. It seems that all pedagogical requirements have been satisfied not only in this work but perhaps in several of its predecessors, and that the attention of teachers of mathematics in the higher institutions of learning be now directed to, what seems to me, to be the true cause of the lamentable state of elementary mathematical teaching in this country. The cause of poor teaching is not so much the lack of teachable text-books in the hands of the pupils as the lack of teachable teachers into whose hands the pupils are committed. Is it not a fact that the teaching of Algebra and Geometry in the great majority of high schools and academies is intrusted to the merest arithmetical tyros, teachers whose thoughts in regard to mathematics are as dark and confused as are those of a savage respecting the laws of the universe. The most noteworthy progress in the teaching of elementary mathematics will be obtained when teachers who have no more interest in mathematics than to make the perfunctory teaching of it a means to gain a livelihood are crowded to the rear and their places taken by the real, earnest, enthusiastic, and enlightened teacher of mathematics. F.

Plane and Solid Geometry. By Isaac Newton Failor, Principal of the Richmond Hill High School, New York City. 12mo., 420 pages. $1.25, net. New York: The Century Co.

The author has aimed to present to the educational public a work on Geometry that should be both teachable and practicable. In the earlier parts of the book most corollaries

are proved and references and postulates are quoted in full. This is necessary in order to give the beginner a notion of what is required to be done. The demonstrations are so arranged that no page needs be turned to read them. A change which, to my mind, does not add to the attractiveness of the book, is that the theorems are set in ordinary long primer type instead of in italics or black-faced type. The book contains a very large collection of exercises well suited to call out the powers of the student.

The publishers have done all that is possible to make the mechanical features of the book first class. F.

Text-book of Mechanics. By Louis A. Martin, M. E. (Stevens), A. M. (Columbia), Assistant Professor of Mathematics and Mechanics in Stevens Institute of Technology. Vol. II, Kinematics and Kinetics. 12mo. Cloth. xiv+214 pages. 91 figures. Price, $1.50, net. New York: John Wiley and Sons.

This volume completes the author's elementary course in Mechanics, the intention of which course is to prepare the student for courses in Applied Mechanics, and to lay a solid foundation for the study of more difficult works. The study of this volnme requires a knowledge of Analytical Geometry and the Calculus. There are many exercises, the solution of which will enable the student to gauge his own knowledge of the subject as he pursues his course. The book is neatly printed and bound. F.

The Elements of Plane and Spherical Trigonometry. By Edwin S. Crawley, Ph. D., Thomas Scott Professor of Mathematics in the University of Pennsylvania. New and Revised Edition. Entirely rewritten. 8vo. Cloth, v+186 pages. Price, $1.25. Philadelphia: Published by the Author.

In this new edition, important changes and additions have been made. Of these, we note the addition of trigonometric equations and elimination, trigonometric series, and hyperbolic functions. Also some additions have been made in the discussions of lines and circles. Thus, some properties of the nine-points circle have been introduced and the determination of the Brocard points. The book concludes with a prief application of trigonometry to Astronomy. The typography of the book is first class and the binding and paper are excellent. F.

Computation and Mensuration. By P. A. Lambert, M. A., Professor of Mathematics in Lehigh University. 8vo. Cloth, ix+92 pages. Price, $0.80. New York: The Macmillan Co.

This work is divided into ten chapters, the first of which deals with Approximate Computation; the second, with Graphic Computation; the third, with the Method of Coordinates; the fourth, with Volumes of Solids Bounded by Planes; the fifth, Computation and Use of Trigonometric Functions; the sixth, with Computation and Use of Logarithms; the seventh, with Limits; the eighth, with Graphic Algebra; the ninth, with Areas Bounded by Curves; and the tenth, with Volumes of Solids.

The aim of the work is to give the student a training in the application of the knowledge gained in the secondary school mathematics, and is intended to come at the close of the secondary school course or at the beginning of the college course.

The work is well conceived and will, if properly used, serve to increase the student's power and enable him to carry on his work in the college with interest and pleasure. F.